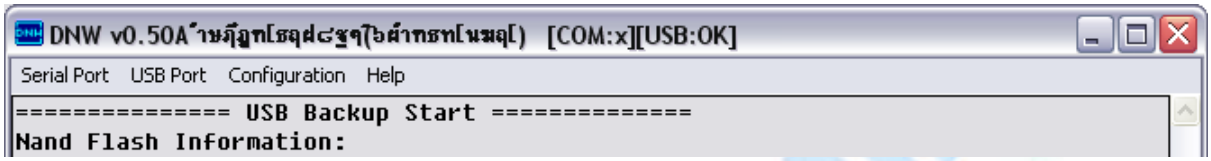
3.4 Download to Run on Memory

3.4.1 Operation 2440test

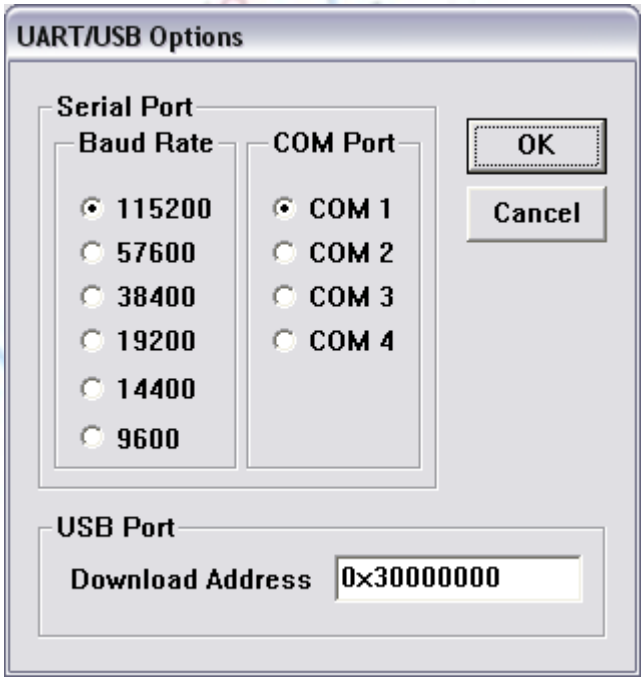
Information		Note
Filename and location on CD-ROM	\images\2440test.bin	2440test_N35.bin applied to NEC 3.5” screen 2440test_A70.bin applied to 7” screen 2440test_VGA1024x768.bin applied to VGA module, 1024x768 resolution
Download Address	0x30000000	
Location of the corresponding non-operating system	source code sample code\2440test	
Project Name	2440test.mcp	default project NEC3.5-inch screen
Compiler Tools	ADS1.2	
Description: NAND flash programmer to run the supervivi need to choose [a] feature, no need to download the address specified Modifying the "\ non-operating system, sample code \2440test\inc\Option.h" in the definition of LCD_TYPE, Can be compiled or the 2440test_A70 or 2440test_N35.bin 2440test_VGA1024x768.bin, see chapter 4.3		

(1) Connect good development board power supply, serial lines, USB cable, and set the DIP switch S2 to start the NOR flash system HyperTerminal to open serial port, respectively, and DNW, the power development board to start.

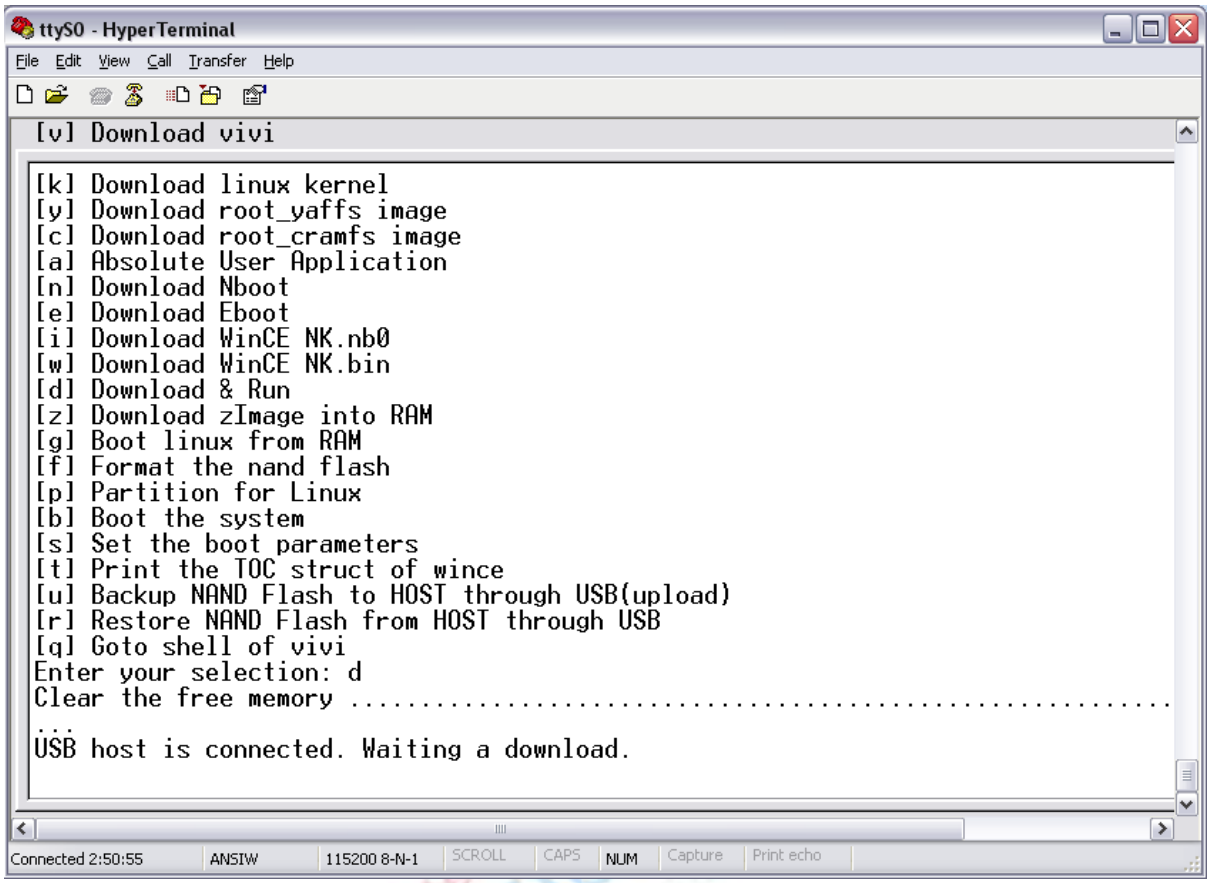
(2) Ensure the USB driver has been installed (as has already been described in detail the installation of USB-driven approach), this can be DNW's title bar to see the show [USB: OK], if there is no driver installed will be displayed [USB: x], as shown:



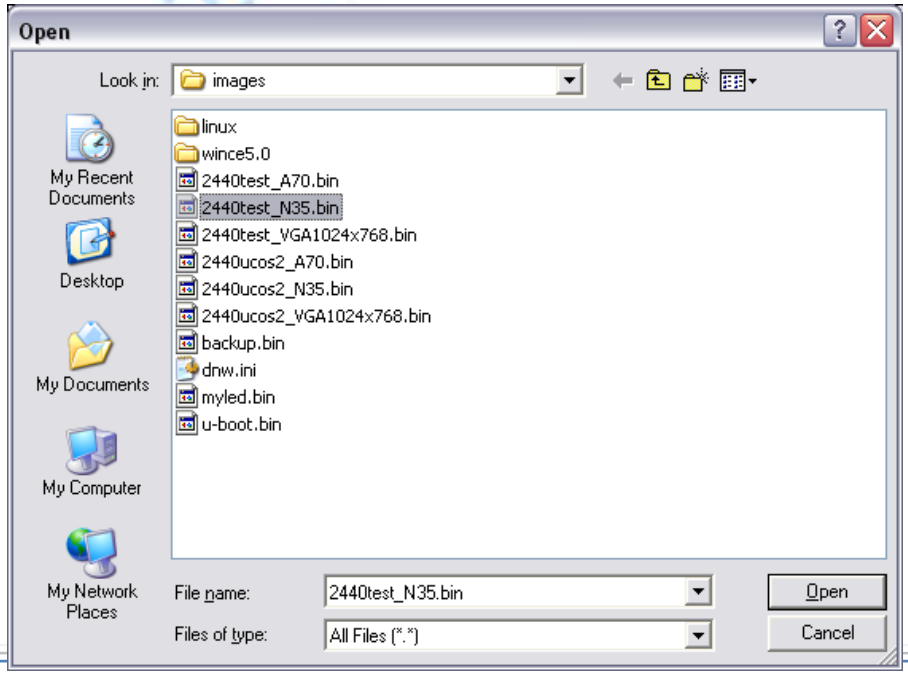
(3) DNW menu Configuration set the USB to download to run address 0x30000000



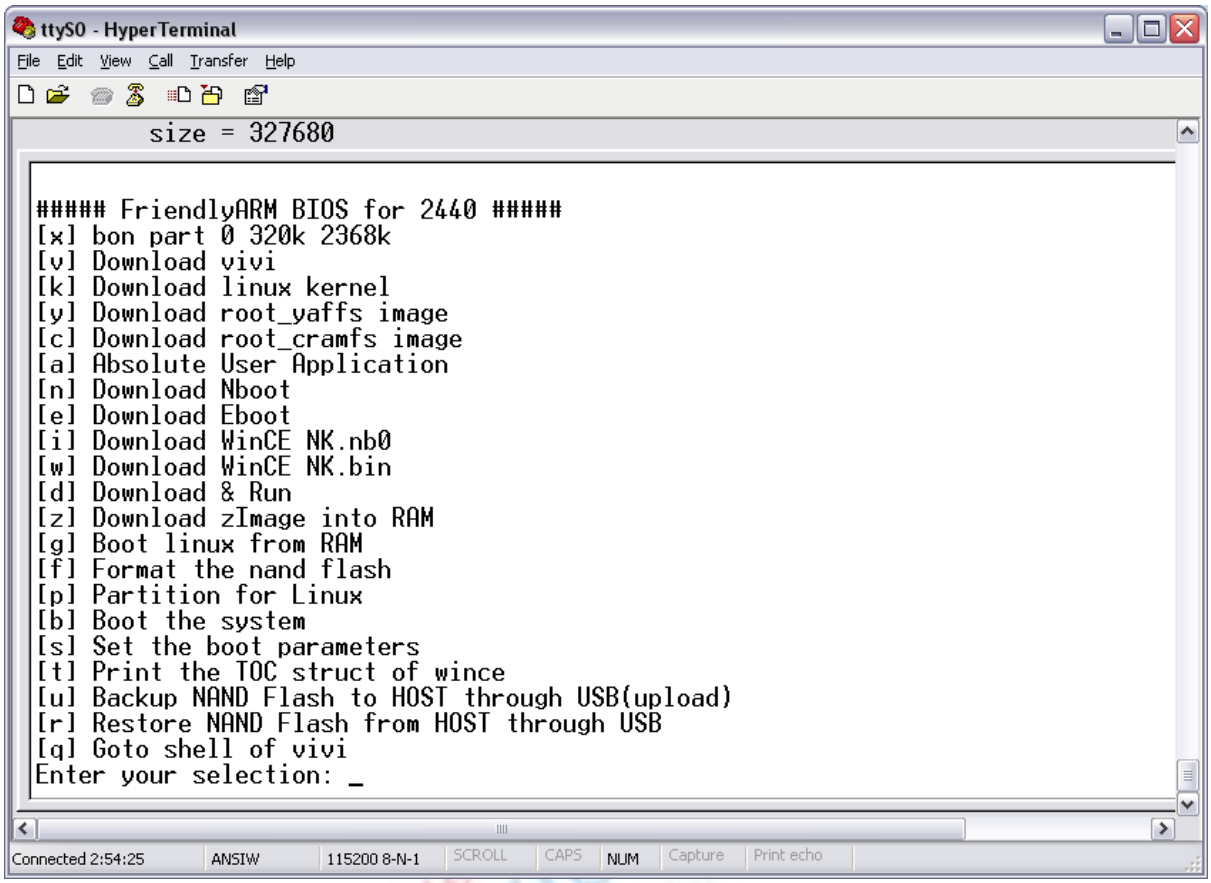
(4) At this time in the BIOS functions of the HyperTerminal menu, select No. [d], there to wait for USB download message.


ttyS0 - HyperTerminal
File Edit View Call Transfer Help
[v] Download vivi
[k] Download linux kernel
[y] Download root_yaffs image
[c] Download root_cramfs image
[a] Absolute User Application
[n] Download Nboot
[e] Download Eboot
[i] Download WinCE NK.nb0
[w] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[g] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[t] Print the TOC struct of wince
[u] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection: d
Clear the free memory .....
...
USB host is connected. Waiting a download.
Connected 2:50:55 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

(5) Click on the DNW procedures "USB Port > Transmit", select 2440test.bin image files (on CD-ROM contents of the images below), and then point "open", so to start the download a.



(6) After the download is automatically run, there are interfaces; section 2.3 will be able to operate in accordance with the test:


ttyS0 - HyperTerminal
File Edit View Call Transfer Help
size = 327680
FriendlyARM BIOS for 2440
[x] bon part 0 320k 2368k
[v] Download vivi
[k] Download linux kernel
[y] Download root_yaffs image
[c] Download root_cramfs image
[a] Absolute User Application
[n] Download Nboot
[e] Download Eboot
[i] Download WinCE NK.nb0
[w] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[g] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[t] Print the TOC struct of wince
[u] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection: _
Connected 2:54:25 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

The use of 7-inch true color screen, the interface will appear as follows:

The use of NEC3.5-inch screen, the interface will appear as follows.

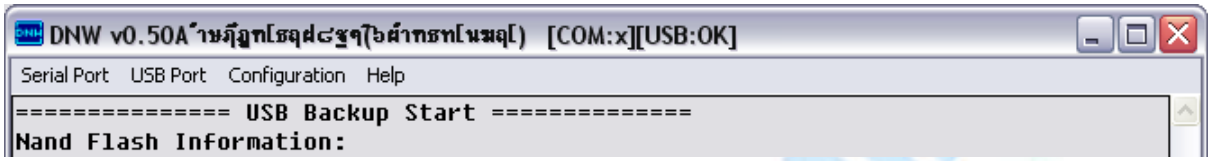
If you are using VGA module plate, the interface will appear as follows.

3.4.2 Operation uCos2

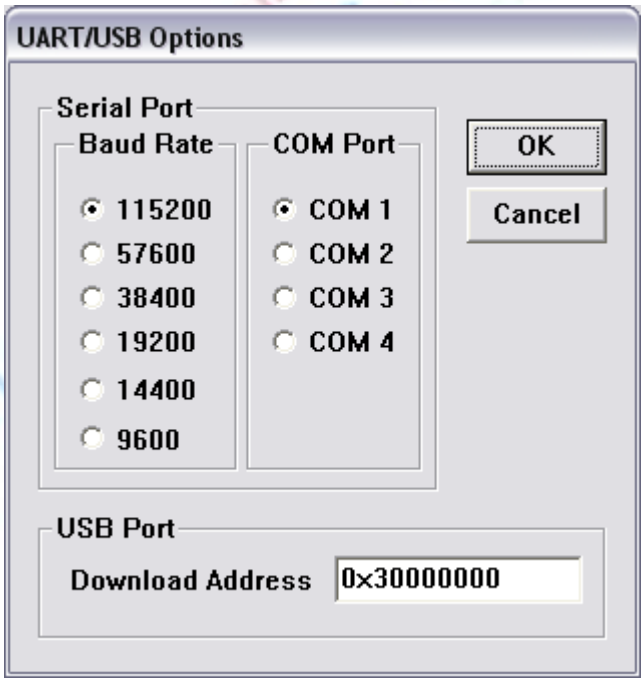
Information		Note
Filename and location on CD-ROM	\images\2440uCos2.bin	2440uCos2_N35.bin for NEC 3.5” screen 2440uCos2_A70.bin for 7” screen 2440uCos2_VGA1024x768.bin for VGA display resolution: 1024x768
Download Address	0x30000000	
Location of the corresponding non-operating system	uCos2\uCos2	
Project Name	uCOS_2440.mcp	default project NEC 3.5” screen
Compiler Tools	ADS1.2	
Description: NAND flash programmer to run the supervivi need to choose [a] feature, no need to download the address specified modifying the "uCos2\uCos2\S3C2440\includes\lcd.h" in the definition of LCD_TYPE can be made 2440uCos2_N35.bin or translated or 2440uCos2_A70 2440uCos2_VGA1024x768.bin, see chapter 4.4		

(1) Connect good development board power supply, serial lines, USB cable, and set the S2 DIP-switch to start the NOR flash system HyperTerminal to open serial port, respectively, and DNW, the power development board to start.

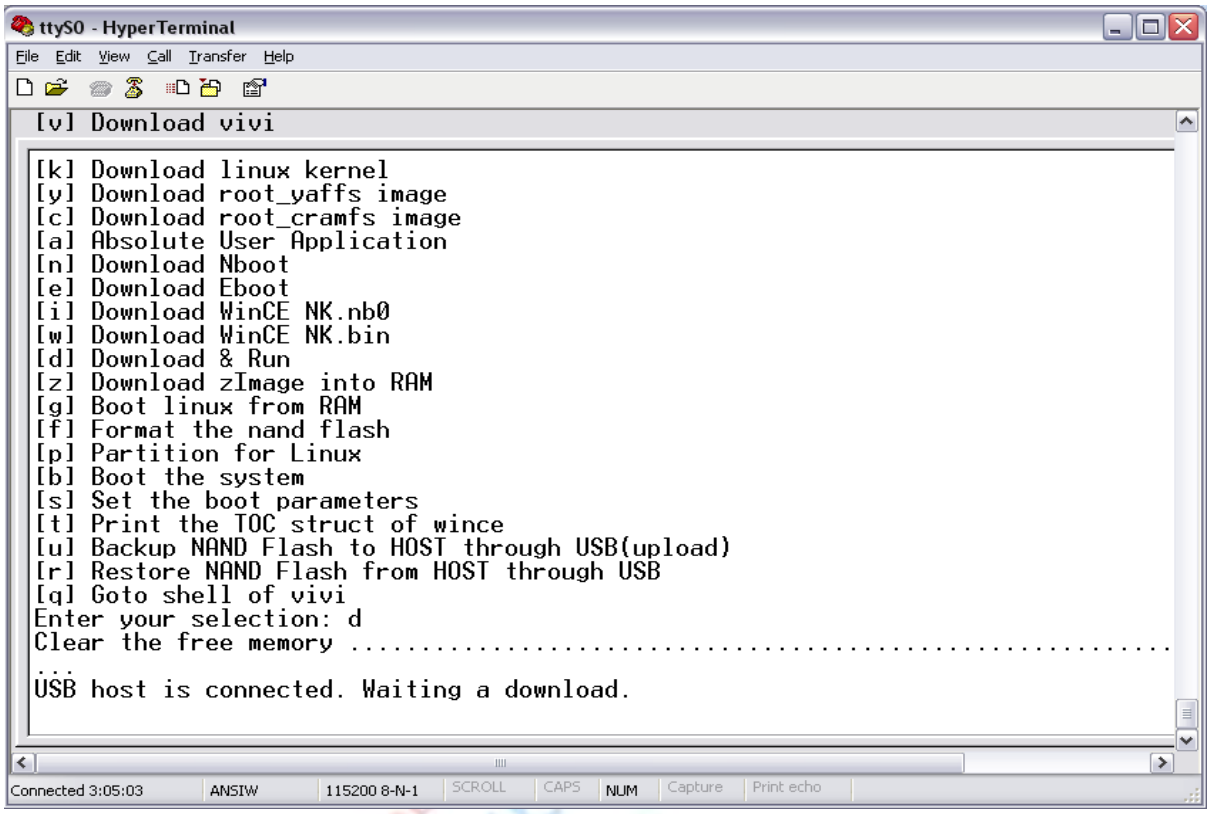
(2) Ensure the USB driver has been installed (as has already been described in detail the installation of USB-driven approach), this can be DNW's title bar to see the show [USB: OK], if there is no driver installed will be displayed [USB: x], as shown:



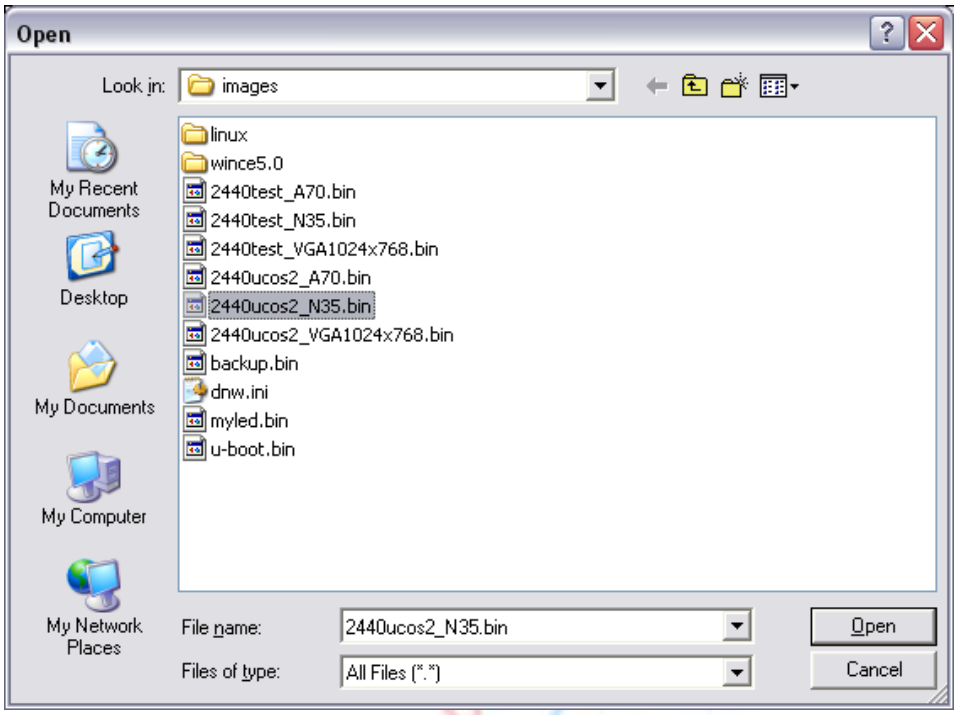
(3) DNW menu Configuration set the USB to download to run address 0x30000000



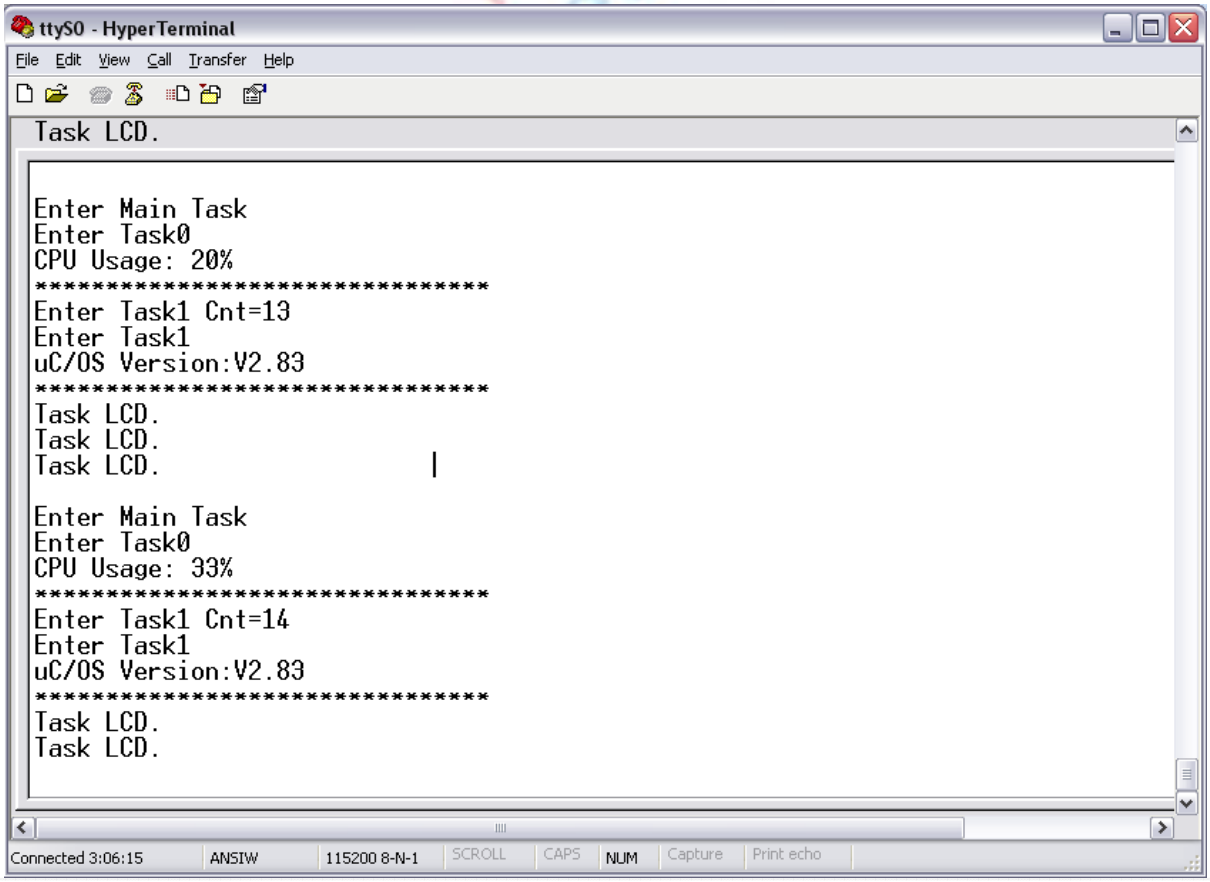
(4) At this time in the BIOS functions of the HyperTerminal menu, select No. [d], there to wait for USB download message:


ttyS0 - HyperTerminal
File Edit View Call Transfer Help
[v] Download vivi
[k] Download linux kernel
[y] Download root_yaffs image
[c] Download root_cramfs image
[a] Absolute User Application
[n] Download Nboot
[e] Download Eboot
[i] Download WinCE NK.nb0
[w] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[g] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[t] Print the TOC struct of wince
[u] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection: d
Clear the free memory .....
...
USB host is connected. Waiting a download.
Connected 3:05:03 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

(5) Click on the DNW procedures "USB Port > Transmit", select 2440test.bin image files (on CD-ROM contents of the images below), and then point "open", so to start the download a.



(6) After the download is automatically run, there are interface:



7-inch screen appears when the background picture of the interface is as follows:

NEC3.5-inch screen, the background picture will appear the following interface:

When using the VGA module, there will be the background picture of the interface is as follows:

3.4.3 Running Linux

Information		Note
Filename and location on CD-ROM	\images\linux\zImage	zImage_N35 apply to NEC 3.5" screen; zImage_A70 applied to 7" screen zImge_VGA1024x768 for VGA display resolution: 1024x768
Download Address	0x30008000	need dnw for address designated dnw
Location of the corresponding non-operating system	linux-2.6.29-mini2440-20090402.tgz	often because the kernel update, the latest date
Project Name		
Compiler Tools	Arm-linux-gcc-3.4.1	
Description: configuration and compile the kernel, see Chapter 8		

Description: in memory running linux system, generally refers to linux kernel (zImage specific for the document), document EC cannot be downloaded through the network or USB memory to run. Generally through the use of linux startup command, specify the NFS (Network File System), or use the development board for "local" file system, such as yaffs (through supervivi the "y" programmer command root_default.img image or other file system files).

Which Linux commands start the specified NFS system?

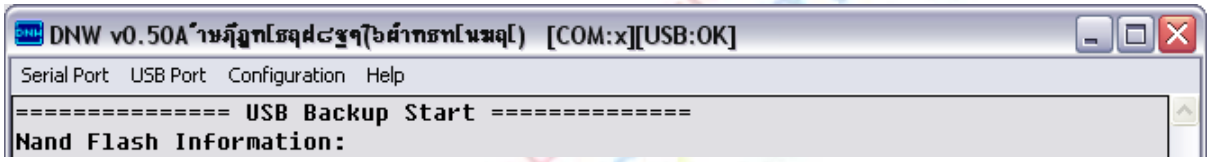
During the development board, the first to enter the supervivi menu, press "q" key to enter command line mode supervivi, losers income (for details see chapter 5.1.4):

Supervivi> param set linux_cmd_line "console=ttySAC0 root=/dev/nfs nfsroot=192.168.1.111: /opt/FriendlyARM/mini2440/root_nfs ip=192.168.1.70:192.168.1.111:192.168.1.111:255.255.255.0: MINI2440.arm9.net: eth0: off "

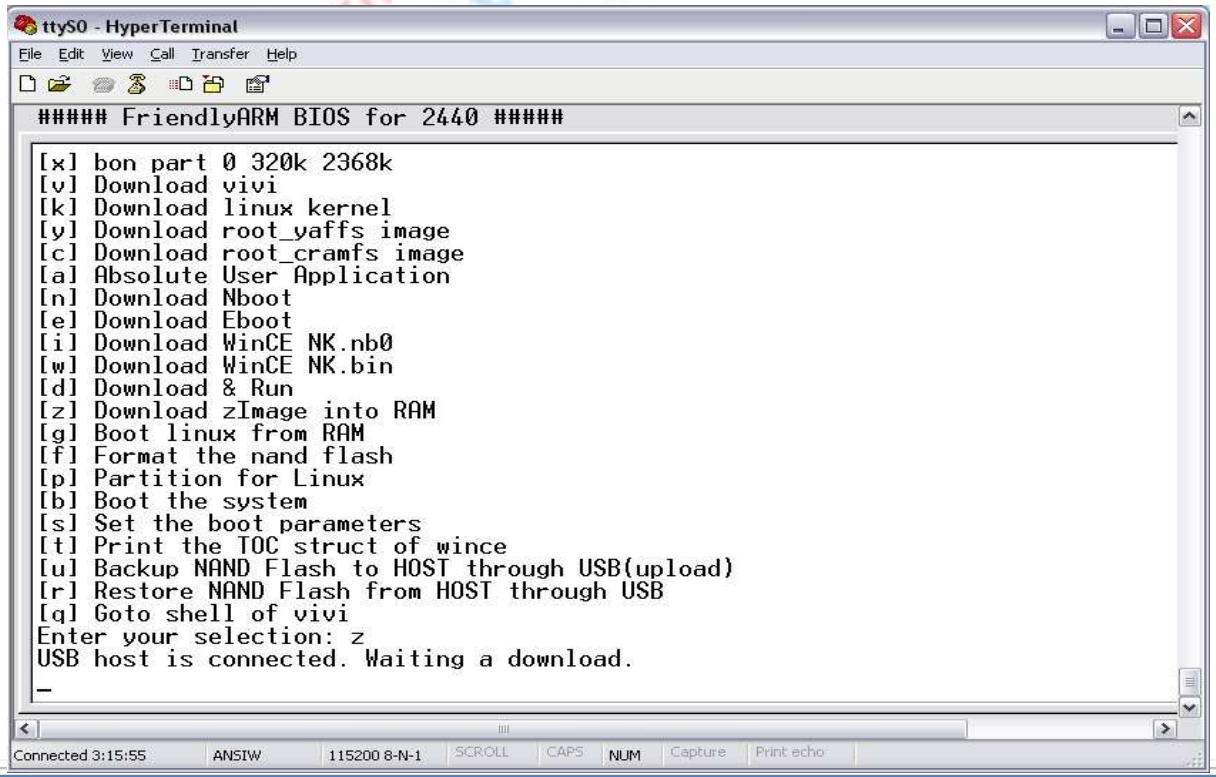
The following is a linux kernel to use USB to download to the development board, and start running the steps, here is the use of file system root_default.img:

(1) Connect good development board power supply, serial lines, USB cable, and set the DIP switch S2 to start the NOR flash system HyperTerminal to open serial port, respectively, and DNW, the power development board to start.

(2) Ensure the USB driver has been installed (as has already been described in detail the installation of USB-driven approach), this can be DNW's title bar to see the show [USB: OK], if there is no driver installed will be displayed [USB: x], as shown:

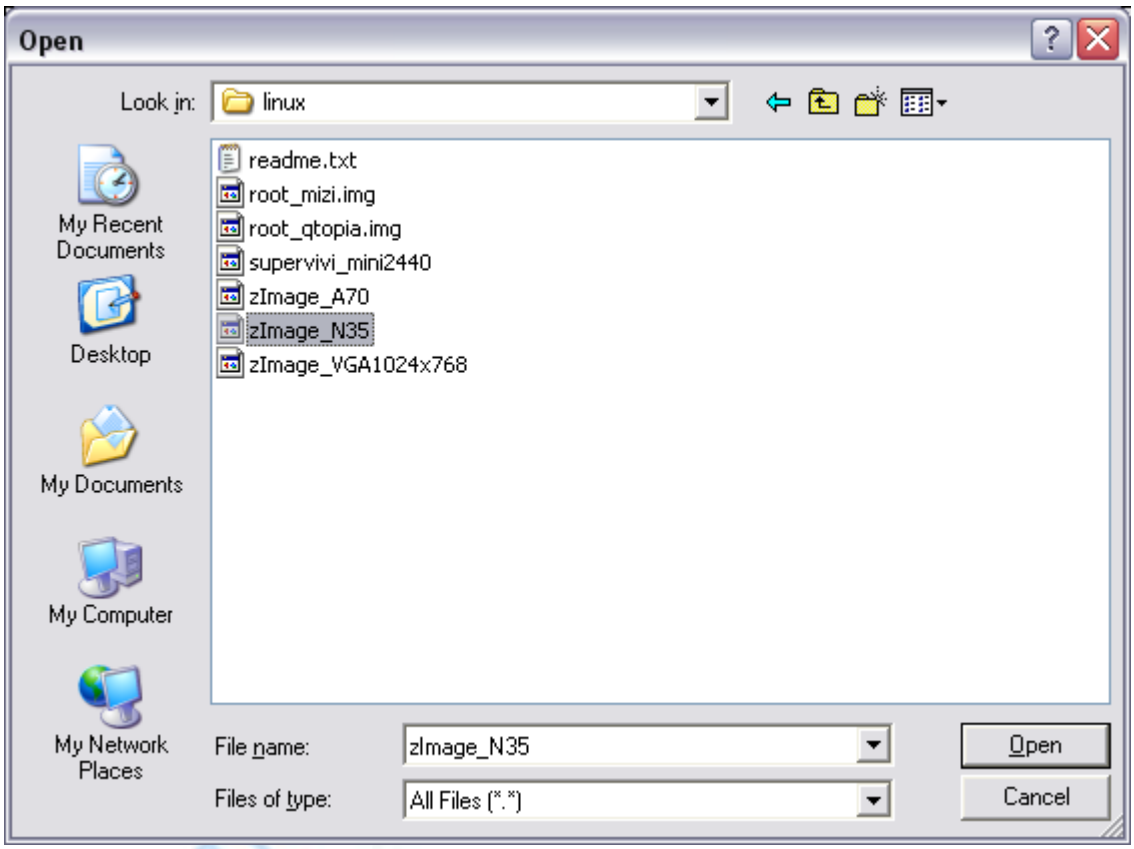


(3) At this time in the BIOS functions of the HyperTerminal menu, select No. [z], there to wait for USB download message:


ttyS0 - HyperTerminal
File Edit View Call Transfer Help
FriendlyARM BIOS for 2440
[x] bon part 0 320k 2368k
[v] Download vivi
[k] Download linux kernel
[y] Download root_yaffs image
[c] Download root_cramfs image
[a] Absolute User Application
[n] Download Nboot
[e] Download Eboot
[i] Download WinCE NK.nb0
[w] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[g] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[t] Print the TOC struct of wince
[u] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection: z
USB host is connected. Waiting a download.
Connected 3:15:55 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

(4) Click on the DNW procedures "USB Port > Transmit", select zImage_n35 or zImage_A70 this image file (in the CD-ROM images\linux directory below), and then click "open", to start the download.

Description (for reference only): function [z] is actually the zImage file downloaded to the memory address of 0x30008000 to side, the size of 0x200000. By [q] to enter the command-line mode supervivi, type "load ram 0x30008000 0x200000" has the same functionality can be achieved.



(5) After the download and return to supervivi menu, then according to the functions of its [g], we can start the system.

Description (for reference only): function [g] is the function of the actual supervivi command line "boot ram", in supervivi enter the command line "boot ram" can achieve the effect of the same functionality.

If the interfaces do not specify a good file system, you can supervivi menu, select [y] programmer a root_default.img, or restart the system using NFS:

3.4.4 Running WinCE

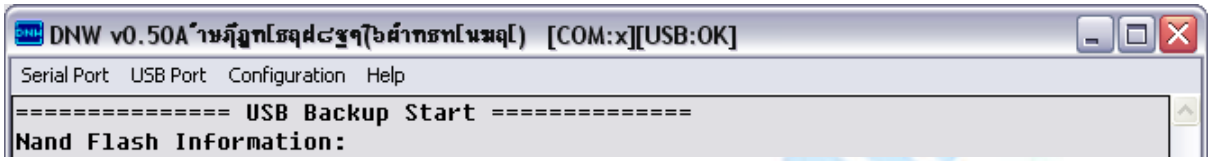
Information		Note
Filename and location on CD-ROM	\images\wince5.0\NK.nb0	NK_N35.nb0 apply to NEC3.5-inch screen; NK_A70.nb0 applied to 7-inch screen NK_VGA1024x768.nb0 for VGA Display resolution: 1024x768
Download Address	0x30200000	Must be specified this download address in dnw
Location of the corresponding non-operating system	smdk2440 directory package	
Project Name	mini2440.pbxml	
Compiler Tools	Platform Builder 5.0	
Description: smdk2440 directory of the development board wince 5.0 BSP, mini2440.pbxml the corresponding item text cases, steps can be in accordance with sections 9.1 to compile the corresponding image file wince core nk.bin and nk.nb0.		

Note: to run in memory nk.nb0, at its start when, as in the wince directory to start the process of creation, will destroy some of the content of NAND flash. If the original Eboot, or the linux kernel and other documents, resulting in the original system is no longer available, please note this!

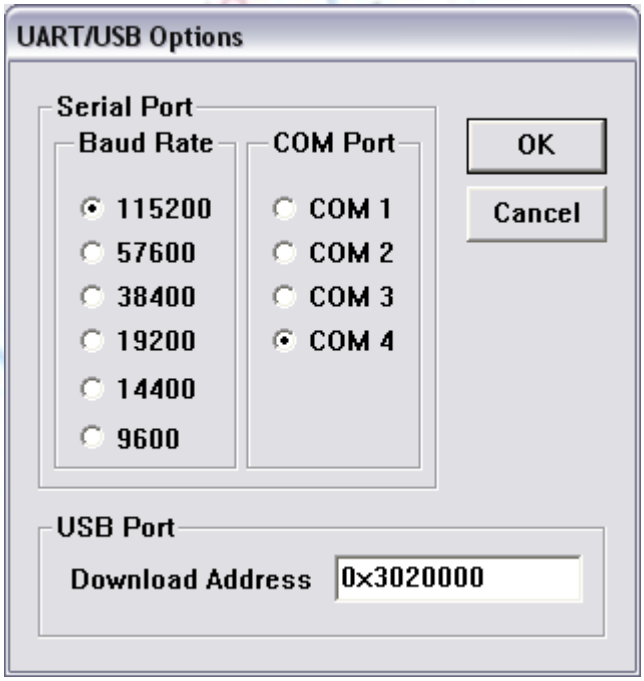
The following is the use of USB download WINCE kernel memory to the development board to run the steps:

(1) Connect good development board power supply, serial lines, USB cable, and set the S2 DIP-switch to start the NOR flash system HyperTerminal to open serial port, respectively, and DNW, the power development board to start.

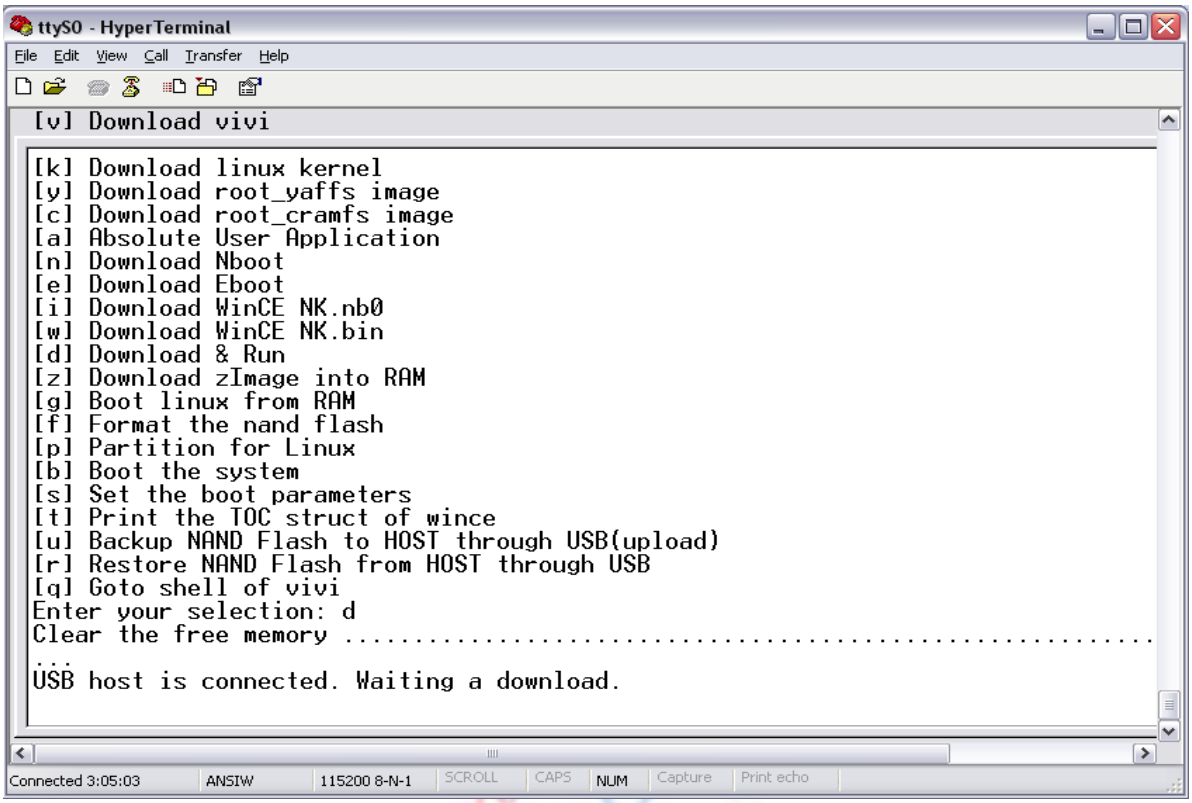
(2) Ensure the USB driver has been installed (as has already been described in detail the installation of USB-driven approach), this can be DNW's title bar to see the show [USB: OK], if there is no driver installed will be displayed [USB: x], as shown:



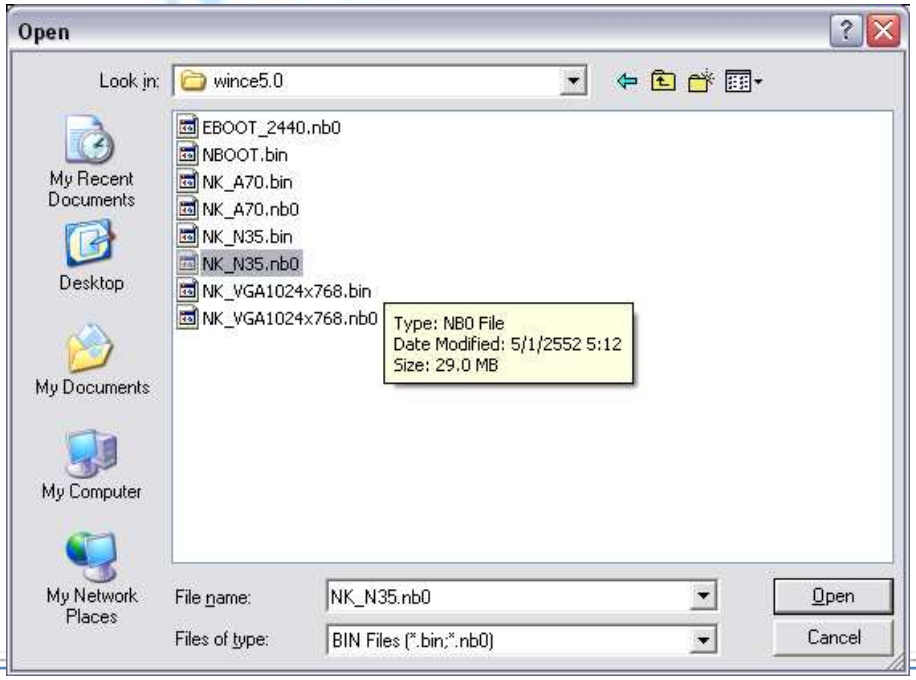
(3) DNW Menu Configuration set the USB to download to run address 0x30200000



(4) At this time in the BIOS functions of the HyperTerminal menu, select [d], there to wait for USB download message:


ttyS0 - HyperTerminal
File Edit View Call Transfer Help
[v] Download vivi
[k] Download linux kernel
[y] Download root_yaffs image
[c] Download root_cramfs image
[a] Absolute User Application
[n] Download Nboot
[e] Download Eboot
[i] Download WinCE NK.nb0
[w] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[g] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[t] Print the TOC struct of wince
[u] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection: d
Clear the free memory .....
...
USB host is connected. Waiting a download.
Connected 3:05:03 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

(5) Click on the DNW procedures "USB Port > Transmit", select NK.nb0 image files (in CD-ROM images\wince5.0 directory below), and then click "open", to start the download.



(6) After the download is automatically run, not to return to supervivi menu. PC-then there may be USB does not recognize the prompt, as long as the USB pull down and re-plug in, you can see a synchronous connection.

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